

PHYSICIANS HEALTH CHOICE

CLINICAL PRACTICE GUIDELINES		
Title: Clinical Practice for the diagnosis and treatment of dyslipidemia and prevention of secondary atherogenesis.	Purpose: To provide a guideline for evaluation and treatment of patients with lipid abnormalities.	PAC Review/Approval Date: QIC Approval Date:
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ASSESSMENT	RECOMMENDATION	COMMENTS
Physical Assessment	Assessment of co-morbidities	
Blood Pressure Control HEDIS	Monitor BP at every visit	Target: < 135/85, with preferred goal <130/80
Weight	Every routine visit	Abdominal Obesity is more correlated with metabolic risk factors than BMI. Waist > 40in in men Waist > 35 in women
Lipid Profile Screening HEDIS	Screen all adults aged 20 or > A <u>fasting</u> lipoprotein profile should be obtained once very five years (TC, HDL, LDL and Triglycerides). *If a <u>non-fasting</u> sample is taken, only use TC and HDL. Follow up of other factors will be necessary if values are abnormal. Treat abnormal lipids in people who are at risk for heart disease.	Goal: <100 md/dL See above goals. In addition, there are three categories of risk based on risk factors identified that modify the goals for LDL mg/dL <ul style="list-style-type: none"> CAD or CAD equivalent (diabetes) <70 Multiple (2+) risk factors <70 Zero to one risk factor <100 Elevated Triglycerides are an independent risk factor: <ul style="list-style-type: none"> Normal <150mg/dL Borderline-high 150-199 md/dL High 200-499 mg/dL Very high ≥ 500 mg/dL

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<p>Identification of Risk Factors</p>	<p><u>Major Risk Factors</u></p> <ul style="list-style-type: none"> • Advancing age (men >45; women >55) • Type 2 DM • Hypertension (>140/90 mmHg or on antihypertensive medication) • Cigarette smoking • Family history of premature CAD (male first degree relative <55; female first degree <65) • Low HDL (<40mg/dL). If HDL is >60, this counts as a “negative” risk factor <p><u>Life Habit Risk Factors</u></p> <ul style="list-style-type: none"> • Obesity • Inactivity • Atherogenic Diet <p><u>Emerging Risk Factors</u></p> <ul style="list-style-type: none"> • Lipoprotein (a) • Homocysteine • Prothrombic • Proinflammatory factors • Impaired fasting glucose • Evidence of subclinical ASHD <p><u>Metabolic Syndrome</u> (combination of major risk factors, life habit and emerging)</p> <ul style="list-style-type: none"> • Abdominal obesity • Atherogenic dyslipidemia • Raised blood pressure • Insulin resistance • Prothrombic and Proinflammatory states 	<p>Special considerations for different populations:</p> <ul style="list-style-type: none"> • Men 35-65 at high risk for CAD, particularly with abdominal obesity and metabolic syndrome. • Women 45-75 risk of onset of CAD is higher, but is treated like men, however onset is generally later than men. Premature disease is seen in those with increased risk factors and metabolic syndrome. • Older adults: men>65, women>75: no hard and fast restrictions for LDL therapy with persons with CAD. For primary prevention, therapeutic lifestyle changes first line of therapy. • Younger adults: men 20-35; women 20-45: Focus on primary prevention and risk factor identification. Pay attention to young men who smoke and have an elevated LDL. • Racial and ethnic groups: African Americans have the highest overall CAD mortality rate. Evidence did not change recommendations for management in these populations. <p>Low HDL associated with insulin resistance, smoking, high carbohydrate intake and certain drugs including beta blockers, anabolic steroids and progestational agents</p>

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		<p>Life Habit Factors are direct targets for clinical intervention, but not used in LDL goal setting</p> <p>Emerging Risk Factors must be weighed individually with regard to need to change goals, and intensity in risk-reduction therapy.</p> <p>Metabolic Syndrome is the second target of risk reduction after LDL.</p> <p>Diagnosed by the presence of three or more of the risk determinants.</p>

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Method of Risk Assessment	<ul style="list-style-type: none"> • Count number of risk factors • For those with 2 or > risk factors, conduct a Framingham scoring to assess 10 year risk assessment 	
PRIMARY PREVENTION	RECOMMENDATIONS	COMMENTS
Intent is to reduce short term and long term risk to prevent dyslipidemia	<ol style="list-style-type: none"> 1. Focuses on lifestyle changes: <ul style="list-style-type: none"> • Reduced intake of saturated fat and cholesterol • Increased physical activity • Weight control 	
	<ol style="list-style-type: none"> 2. Any person with elevated LDL or other form of hyperlipidemia should undergo clinical or lab assessment to rule out secondary dyslipidemia before initiation of lowering therapy. Causes include: <ul style="list-style-type: none"> • Diabetes • Hypothyroidism • Obstructive liver disease • Chronic Renal Failure • Drugs that increase LDL and decrease HDL (progestins, anabolic steroids and corticosteroids) 	
Reducing existing dyslipidemia in patients with existing CAD has been shown to reduce mortality, major coronary events, need for coronary procedures and prevention of stroke in those with existing CAD.	<ol style="list-style-type: none"> 1. Reduce LDL to <100. 2. With hospitalizations, take lipid measures on admission or within 24 hours. 3. Evaluate LDL lowering therapy before or at discharge. 4. For patients with elevated triglycerides, treatment follows LDL lowering therapy and other lifestyle recommendations, except in those whose triglyceride level is > 500: initial goal is to prevent acute pancreatitis with: <ul style="list-style-type: none"> • Very low fat diets (< 15% of intake) 	Adjustment of therapy may be needed after 12 weeks.

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	<ul style="list-style-type: none"> • Weight reduction • Increased activity • Drugs such as nicotinic or fibrates <p>5. Low HDL should focus on LDL goals, and other therapies as warranted by assessment of risk factors</p>	
First Modality of LDL therapy:	<p>1. Therapeutic Lifestyle Changes:</p> <ul style="list-style-type: none"> • Diet reduction in saturated fat and cholesterol • If metabolic syndrome or its associated risk factors are present, weight reduction and increased physical activity are recommended. <p>2. Education/Counseling</p> <ul style="list-style-type: none"> • Involve patients in their care; self monitoring • Increase convenience and access to care • Use systems to reinforce adherence and maintain contact • Provide explicit instruction and good counseling to teach patient how to follow prescribed treatment • Reinforce and reward adherence • Increase visits for patients unable to achieve goal • Patient appointment reminders 	<p>LDL goals/cutoff points for initiation of therapeutic lifestyle changes: CAD or CAD equivalent ≥ 100 mg/dL 2+ risk factors ≥ 130 mg/dL 0 to 1 risk factor ≥ 160 mg/dL</p>
DRUG THERAPY	RECOMMENDATION	COMMENTS
Second modality of LDL therapy used in conjunction with therapeutic lifestyle changes	<p>Used in persons with three categories of risk:</p> <ul style="list-style-type: none"> • CAD or CAD equivalent • 2+ risk factors • 0 to 1 factor 	<p>CAD or CAD equivalent ≥ 130mg/dL 2+ factors ≥ 130mg/dL 0 to 1 factor ≥ 190mg/dL</p>

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	Drug classes used: HMG CoA reductase inhibitors (statins) Bile Acid sequestrants Nicotinic Acid Fibric Acids	Lipid levels should be reassessed after 6 weeks, and again after 12 weeks. Therapy is modified or intensified to achieve goals. Once goals are met on drug therapy, patient should have lipids monitored every 4-6 months, or as necessary. Nicotinics and Fibrates used in those with elevated triglycerides Available OTC
	Use of ASA in patients with CAD	

REFERENCES: NCEP: Adult Treatment Panel III; NIH, NHLBI 2001